

What is claimed is:

1. An encryption method for encrypting information including a plurality of continuous unit blocks having a reproduction order, said plurality of unit blocks being encrypted one unit block at a time,

wherein a seed of an encryption key for encrypting a unit block is based on one or more unit blocks that are, in the reproduction order, before the unit block or on information generated by encrypting one or more unit blocks before the unit block.

2. The encryption method according to claim 1, wherein the seed of the encryption key is chained at least twice.

3. The encryption method according to claim 2, wherein the chain is reset when the seed is chained a predetermined number of times.

4. The encryption method according to claim 2, wherein an initial value IV of a seed of an encryption key used for encrypting a first unit block of the plurality of unit blocks having the reproduction order is stored,

wherein the chain has a plurality of hierarchy levels, a first hierarchy level is encrypted based on the initial value IV of the seed of the encryption key, and a second and higher hierarchy levels are encrypted based on a seed of an encryption key at a lower hierarchy level,

wherein, when encrypted unit blocks from the first unit block to any given unit block of the encrypted information are decrypted for reproduction, the initial value IV of the seed of the encryption key that was stored is used, and

wherein, when the reproduction of the unit blocks to the given unit block ends, the initial value IV of the seed of the encryption key that was stored is erased and both a seed of an encryption key used for encrypting a unit block

that follows the given unit block in the reproduction order and a seed of an encryption key used for encrypting a unit block at another hierarchy level after the given unit block are stored.

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5. An encryption method for encrypting information including a plurality of continuous unit blocks having a reproduction order, said plurality of unit blocks being encrypted one unit block at a time,

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wherein a seed of an encryption key for encrypting a unit block is information based on an encryption key used for encrypting a unit block that is, in the reproduction order, before the unit block to be encrypted.

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6. A decryption method for decrypting information including a plurality of continuous encrypted unit blocks having a reproduction order, said plurality of encrypted unit blocks having being encrypted one unit block at a time,

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wherein a seed of an encryption key for decrypting an encrypted unit block is based on one or more unit blocks that are, in the reproduction order, before the unit block or on information generated by encrypting one or more unit blocks before the unit block.

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7. The decryption method according to claim 6, wherein the seed of the encryption key is chained at least twice.

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8. The decryption method according to claim 7, wherein the chain is reset when the seed is chained a predetermined number of times.

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9. The decryption method according to claim 7, wherein an initial value IV of a seed of an encryption key used for encrypting a first unit block of the plurality of unit blocks having the reproduction order is stored, wherein the chain has a plurality of hierarchy levels,

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a first hierarchy level is encrypted based on the initial value IV of the seed of the encryption key, and a second and higher hierarchy levels are encrypted based on a seed of an encryption key at a lower hierarchy level,

5           wherein, when encrypted unit blocks from the first unit block to any given unit block of the encrypted information are decrypted for reproduction, the initial value IV of the seed of the encryption key that was stored is used, and

10           wherein, when the reproduction of the unit blocks to the given unit block ends, the initial value IV of the seed of the encryption key that was stored is erased and both a seed of an encryption key used for encrypting a unit block that follows the given unit block in the reproduction order and a seed of an encryption key used for encrypting a unit block at another hierarchy level after the given unit block are stored.

10. A decryption method for decrypting information including a plurality of continuous encrypted unit blocks having a reproduction order, said plurality of encrypted unit blocks having being encrypted one unit block at a time,

20           wherein a seed of an encryption key for decrypting an encrypted unit block is information based on an encryption key used for decrypting a unit block that is, in the reproduction order, before the unit block to be decrypted.

11. A recording and reproducing apparatus comprising: encrypting means for encrypting information including a plurality of continuous unit blocks having a reproduction order, one unit block at a time;

30           recording means for recording the encrypted information on a recording medium; and

35           decrypting means for decrypting the plurality of encrypted unit blocks for reproduction, one unit block at a time, which are the encrypted information read from said recording medium,

wherein a seed of an encryption key for encrypting a unit block and a seed of an encryption key for decrypting an encrypted unit block are based on one or more unit blocks that are, in the reproduction order, before the unit block or on information generated by encrypting one or more unit blocks before the unit block.

12. The recording and reproducing apparatus according to claim 11, wherein the seed of the encryption key is chained at least twice.

13. The recording and reproducing apparatus according to claim 12, wherein the chain is reset when the seed is chained a predetermined number of times.

14. The recording and reproducing apparatus according to claim 11, further comprising:

storage means for storing an initial value IV of a seed of an encryption key used for encrypting a first unit block of the plurality of unit blocks having the reproduction order,

wherein the initial value IV of the seed of the encryption key stored in said storage means is used when the first unit block of the plurality of unit blocks encrypted by said encrypting means and having the reproduction order is decrypted for reproduction.

15. The recording and reproducing apparatus according to claim 11, further comprising:

storage means for storing an initial value IV of a seed of an encryption key used for encrypting a first unit block of the plurality of unit blocks having the reproduction order,

wherein, when encrypted unit blocks from the first unit block to any given unit block, which are the encrypted information, are decrypted for reproduction, the initial value IV of the seed of the encryption key that was stored in said storage means is used, and

wherein, when the reproduction of the unit blocks to the given unit block ends, the initial value IV of the seed of the encryption key is erased from said storage means and a seed of an encryption key used for encrypting a unit block that follows the given unit block in the reproduction order is stored.

16. The recording and reproducing apparatus according to claim 12, further comprising:

storage means for storing an initial value IV of a seed of an encryption key used for encrypting a first unit block of the plurality of unit blocks having the reproduction order,

wherein the chain has a plurality of hierarchy levels, a first hierarchy level is encrypted based on the initial value IV of the seed of the encryption key, and a second and higher hierarchy levels are encrypted based on a seed of an encryption key at a lower hierarchy level,

wherein, when encrypted unit blocks from the first unit block to any given unit block of the encrypted information are decrypted for reproduction, the initial value IV of the seed of the encryption key that stored in said storage means is used, and

wherein, when the reproduction of the unit blocks to the given unit block ends, the initial value IV of the seed of the encryption key is erased from said storage means and both a seed of an encryption key used for encrypting a unit block that follows the given unit block in the reproduction order and a seed of an encryption key used for encrypting a unit block at another hierarchy level after the given unit block are stored in said storage means.

17. A recording and reproducing apparatus comprising: encrypting means for encrypting information including a plurality of continuous unit blocks having a reproduction order, one unit block at a time;

recording means for recording the encrypted information

on a recording medium; and

decrypting means for decrypting the plurality of encrypted unit blocks for reproduction, one unit block at a time, which are the encrypted information read from said recording medium,

wherein a seed of an encryption key for encrypting a unit block and a seed of an encryption key for decrypting an encrypted unit block are information based on an encryption key used for encrypting a unit block that is, in the reproduction order, before the unit block to be encrypted or decrypted.